REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1, 3-5, and 7-8 are presently active in this case, Claims 1, 3, 5, and 7 having been amended by the present amendment, and Claims 2, 6, and 9-20 having been previously canceled.

In the outstanding Official Action, Claims 1, 3-5, and 7-8 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite, and under 35 U.S.C. 102(b) as being anticipated by Liu ("A Hierarchical Hybrid System Model and Its Simulation", 1999).

In for of the outstanding grounds for rejection Claims 1, 3, 5, and 7 have been amended to clarify the claimed invention and thereby more clearly patentably define over the cited prior art. Amended Claim 1 finds support in the original disclosure as follows:

1) The expression "a source program of a hybrid model of the mechanical device, the source program including..." is supported by the specification, page 8, line 15 through page 11, line 26.

2) The expression "generating from the first source code a fourth source code of model equation registration program..." is supported by the specification, page 12, lines 10-14, and page 13, lines 17-26.

3) The expression " generating from the second source code a fifth source code of event control program..." is supported by the specification, page 12, lines 10-14, and page 15, lines through page 16, line 13.

4) The expression "generating from the third source code a sixth source code of additional processing program..." is supported by the specification, page 16, line 20 through page 17, line 2.

5) The expression "executing a model equation registration program..." is supported by the specification, page 21, lines 17 to 24.

6) The expression "executing an event control program..." is supported by the specification, page 22, lines 4-7, and page 15, lines 23-26.

7) The expression "executing an additional processing program based on the sixth source code, wherein a control signal including the data is exchanged to/from the mechanism control software" is supported by the specification, page 17, lines 4-5, page 27, lines 5-8, and page 27, line 26 through page 28, line 2.

Accordingly, in view of the above-identified support, it is respectfully submitted that no new matter has been added by the amendment to Claim 1. As the amendments to the other claims are similar, Applicants consider that no new matter issue is raised by the present amendment.

Next, Applicants address the outstanding rejection under 35 USC § 112, 2nd para., explaining how the amendatory language addresses and resolves the various indefiniteness concerns raised in the outstanding rejection under 35 USC § 112, as follows:

i. The expressions "description" and "description data" haven been changed to -- -- source code-- and --source program--, respectively.

ii. The expression "switching of the continuous system equations upon state transition" has been changed to --continuous system equations that are activated or deactivated upon occurrence of the first event--.

iii. The expression "description of an additional process other than ...." has been changed to --a third source code wherein an additional process which is called when the second event is occurred--.

9

iv. The "three programs" correspond to "fourth source code of model equation registration program", "fifth source code of event control program," and "sixth source code of additional processing program," recited in the amended claims.

v. The expression "starting a simulation of the mechanism" has been deleted. The "entire hybrid model" is a simulation target, and is simulated using the internal expressions of continuous system equations.

vi. The expression "in response to a first event that is detected by the second program" has been deleted.

vii. Since the expression "starting a simulation of the mechanism" has been deleted, "executing the simulation to output data..." is believed to be clear.

viii. The expression "according to" included in the expression "according to the converted data structure" has been changed to --using--.

ix. The expression "wherein the data is supplied to the mechanism control software.." has been deleted. Further, the expression "an additional processing program based on the sixth source code, wherein the data is supplied to the mechanism control software as a control signal" has been added to clarify the structure. Note that in the additional process, data in the form of a "control signal" can be received from and transmitted to mechanism control software. See the specification, page 27, line 5, to page 28, line 9. From this portion, it is evident that various types of control including contorl of starting simulation can be performed in the additional process. The "control signal" can be detected in the additional process when an event related to the additional process has occurred.

x. The expression "executing the third program..." has been changed to --executing an additional processing program based on the sixth source code, wherein a control signal including the data is exchanged to/from the mechanism control software--. Detection of an

event is clearly from the expression "a first source code wherein occurrences of first and

second events are described in a hybrid model language." The "execution of the third

program ("additional processing program")" may influence simulation, as is described in the

above item ix.

xi. Amendment has been made to recite that "equation registration program", "event

control program" and "additional processing program" are executed during simulation.

xii. The relationship between "control signals" and "mechanism control software" is

clarified in amended claims 1 and 5.

Accordingly, in view of the above explanation, it is respectfully submitted that the

outstanding rejection under 35 USC § 112, 2nd para., has been overcome. Withdrawal thereof

is therefore respectfully requested. If the Examiner disagrees, the Examiner is invited to

telephone the undersigned with any suggestions the Examiner may have, as Applicants are

happy to work with the Examiner in a joint effort to derive mutually satisfactory claim

language.

Turning now to the applied prior art cited in the outstanding rejection under 35 USC

§102, it is Applicants' view that <u>Liu</u> merely describes a conventional structure of a hybrid

model, whereas the claimed invention enables an additional process to be described in a

hybrid model. This point is clarified in the amended claims, consistent with the disclosure at

page 11, lines 18-26 of the specification, which states,

> According to the above feature, (1) the contents of the additional
> process can be described on the same program source as a description
> corresponding to a hybrid model having switching of continuous system
> equations; and (2) control for, e.g., calling the additional process can be
> included in a hybrid description.
> Therefore, this embodiment allows a user to describe a
> comprehensible, simple simulation model.

Further, page 28, lines 3-9 of the specification states,

As described above, in this hybrid simulation, a description required to achieve collaboration with an external control system to be controlled in the simulation can be easily described on the identical source. Of course, different simulation results are obtained depending on the state of the object to be controlled.

Thus, in amended Claims 1 and 5, the source code (fifth source code) of the "event control program which calls a function of activating or deactivating the continuous system equations when the first event is occurred, and calls the additional process when the second event is occurred" is generated using the source program of a hybrid model. Liu does not describe this feature of the claimed invention, and hence Liu neither anticipates nor renders obvious the subject matter defined by amended Claims 1, 3-5, and 7-8.

Consequently, in view of the present amendment and in light of the above comments, no further issues are believed to be outstanding, and the present application is believed to be in condition for allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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